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Michael Harris

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EXAMINER

EMPIE, NATHAN H

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/553,359	Applicant(s) HARRIS ET AL.	
	Examiner NATHAN H. EMPIE	Art Unit 1712	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 July 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) 11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>10/13/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of group I claims 1-10 in the reply filed on 7/19/10 is acknowledged. The traversal is on the ground(s) that the examiner has not established that the inventions of Group I and II are independent and distinct and are to different inventive concepts; and that the Examiner has not demonstrated that a serious burden exists in examining the two groups. This is not found persuasive because this application is filed as a national stage entry; while the Applicant's arguments are directed to restriction practices for non-national stage entries. Nation stage entry applications are governed by a separate restriction practice, according to 37 CFR 1.499: "If the examiner finds that a national stage application lacks unity of invention under §1.475, the examiner may in an Office action require the applicant in the response to that action to elect the invention to which the claims shall be restricted. Such requirement may be made before any action on the merits but may be made at any time before the final action at the discretion of the examiner." As described in the written restriction requirement of 6/18/10 (and additionally in the rejection of at least claim 1 described below), a lack of unity of invention *a posteriori* is presented as the claims share a common (not special) technical feature, and such is all that is required of the examiner to require a restriction in a national stage entry application. As a courtesy and with regard to applicant's arguments the examiner asserts that a serious burden exists in the differing issues likely to arise during the prosecution of the different inventions.

The requirement is still deemed proper and is therefore made FINAL.

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2. Claim 11 is withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 7/19/2010. Claims 1-10 are currently pending examination.

Claim Objections

3. Claim 9 is objected to because of the following informalities: "differ-ence" appears to be a typo for intended "difference". Appropriate correction is required.

4. Claims 9 and 10 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claims 9 and 10 do not in all situations contain all the features of independent claim 1 from which they indirectly depend as they recite limitations essentially omitting a step of claim 1.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1-10 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. Claims 1, 3, 4, 5, and 8 recite the limitation "re-suction". There is insufficient antecedent basis for this limitation in these claims. The term re-suction would suggest that suction being conducted prior, but nowhere in claims 1-8 does a limitation directed

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to a functional recitation of suctioning exist. For purposes of examination the term “re-suctioning” is being interpreted as “suctioning”.

8. Claim 8 recites the limitation “the second end of the body”. There is insufficient antecedent basis for this limitation in the claim. Neither of claims 1 nor 7 from which claim 8 directly and indirectly depends recites any limitations on the size, shape, or orientation of body being coated providing for the basis of the term “the second end”. For purposes of examination the term “the second end of the body” is being interpreted as “an end of the body”.

9. As to the dependent claims, they remain rejected as no separate arguments are provided.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Kiessling et al (US 2003/0044250; hereafter Kiessling).

12. Claim 1: Kiessling teaches a method for coating open-pored bodies (such as porous honeycomb cylinder structures (10)) with at least one coating suspension (80) including, in particular, solids (finely divided high surface area materials such as aluminum oxides) and solutes (soluble precursors) in a liquid medium (liquid phase), in

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a quantity in wet state which is to correspond to at least a required target quantity (target take-up) (see, for example, abstract, [0006], [0018-0024], and Fig 1-3),

13. wherein the coating operation includes a variation in the applied wet coating quantity from one body to the other (see, for example, [0055], and fig 3 wherein undesired blockages / excess wet coating if observed; alternately intrinsic to all processes is some degree or variability), the method being characterized by the steps of:

14. (a) coating a body with an actual quantity of the coating suspension (filling amount), which is always larger than the required target quantity (target take-up) taking the variation of the coating operation into account (see, for example, [0035-0041], Fig 2, 3, and 5),

15. (b) determining the difference between the actual quantity (filling amount) and the required target quantity (see, for example, [0040] filling amount= 750 g, target take up =200g), and

16. (c) reducing the difference between actual quantity and target quantity by removing still wet coating suspension by suction (by reversing pump / pumping out, and/or subsequent suctioning) (see, for example, [0042], [0049], [0055], fig 2, 3, and 5).

17. Claim 2: Kiessling further teaches wherein steps (a) to (c) are followed by drying and calcination of the applied coating suspension (see, for example, [0043]).

18. Claim 3: Kiessling further teaches , wherein step (c) includes reducing the difference between actual quantity and target quantity by suction from one end of the body using an intensity (power) and/or duration matched with the magnitude of the

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differential quantity (see, for example, [0050], [0055], and Fig 3 and 5; wherein it is taught that the required power and duration to achieve target take-up can be readily determined by a person skilled in the art in a few preliminary trials, and such a power and duration is applied).

Claim Rejections - 35 USC § 103

19. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

20. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kiessling as applied to claim 3 above, and further in view of Sulc (US Patent 6,487,869; hereafter Sulc).

21. Claim 4: Kiessling teaches the method of claim 3 (described above), wherein Kiessling further explicitly teaches that "The power of the blowing out or suctioning processes and the duration of these processes until target take-up is achieved can be determined by a person skilled in the art in a few preliminary trials" (see, for example, [0055]). But Kiessling is silent as to the specifics of the testing so it does not explicitly teach wherein intensity and/or duration of suction are selected from tables of values for the measured actual quantity established in preliminary tests. Sulc teaches a method of determining intensities / duration of process variables required to generate a specific response (see, for example, abstract, col 5 lines 9 - 27). Sulc further teaches that it is well known in the art to use tables to look up appropriate levels at which to control

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process variables to achieve a desired outcome (see, for example, col 5 lines 9-27). As both Kiessling and Sulc are directed to methods of regulating processing variables to achieve a desired response, it would have been obvious to one of ordinary skill in the art at the time of invention to have incorporated using tables of values for the measured actual quantity from the taught preliminary trials to look up appropriate intensity and/or duration of suction; as such look-up tables are well known in the art, and further predictably provide a direction as to appropriate values to use to generate a desired result based on the current condition of the body.

22. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kiessling in view of Sulc as applied to claim 4 above, and further in view of Williams (US patent 6,594,542; hereafter Williams).

23. Claim 5: Kiessling in view of Williams teaches the method of claim 4 (described above) wherein the prior art have taught regulating the duration and / or intensity of suction in accordance to values for the actual quantity determined from prior trials to reduce the difference between actual and target coating amounts (described in rejection of claim 4 above), but neither explicitly teaches that the prior trials include data gathered / determined for bodies coated immediately before the current body. Williams teaches a method of controlling the coating / removal process of articles including the incorporation of quality control methods (see, for example, abstract, col 4 line 62 - col 5 line 7). Williams further teaches processes are known to fluctuate with time, and that measurements gathered from directly previous processed samples can be used to

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determine adjusted processing conditions for a next subsequent sample to be processed to aid in combating these fluctuations (see, for example, col 4 line 62 - col 5 line 7). Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to have incorporated data collected from bodies coated immediately before the current into the data used to determine the current processing conditions as such information would improve process outcome by combating processing fluctuations occurring with the passage of time.

24. Claims 6 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kiessling as applied to claim 1 above, and further in view of Hoyer et al (US patent 3,959,520; hereafter Hoyer).

25. Claim 6: Kiessling has taught the method of claim 1 (described above), wherein Kiessling has further taught that the actual quantity of coating material applied in a calculated and controlled manner using sensors and metering equipment (see, for example, [0040-0041]), but Kiessling does not explicitly teach such equipment include weighing the body before and after coating. Hoyer teaches a method of coating open-pored honeycomb structures (see, for example, abstract, col 1 lines 1 – 29, col 2 line 66 – col 3 line 30). Hoyer further teaches that incorporating weighing steps before and after each coating process operation will aid in determined the exact amount of coating being maintained in the body, and further such actions will aid sample uniformity and quality control (see, for example, col 3 line 31 – col 4 line 37). Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to have

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incorporated determining the actual quantity by weighing the body before and after each coating process operation into the method of Kiessling as such an incorporation would improve sample quality control and ultimately sample uniformity.

26. Claim 9: Kiessling in view of Hoyer teach the method of claim 6 (described above), wherein Kiessling has further taught that the removal can alternatively be conducted in one suction step instead of a two step pumping and re-suctioning (see, for example, [0042]).

27. Claims 7, 8, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kiessling in view of Hoyer as applied to claim 6 above, and further in view of Kiessling et al (US 2001/0024686; hereafter KiesslingB)

28. Claim 7: Kiessling teaches the method of claim 6 (described above) wherein Kiessling has taught a method of removing excess / blockages of coating suspension by using suction (see, for example, [004] and [0055]); and Hoyer has taught that between each coating process operation (such as between emptying and after subsequent suctioning) the sample is weighed to determine the actual / excess coating amount. But Kiessling in view of Hoyer do not explicitly teach wherein the determining and reducing steps of claim 1 are run at least twice until the actual quantity is within a previously specified tolerance range above the target quantity. KiesslingB similarly teaches a method for coating open-pored bodies (such as porous honeycomb cylinder structures (10)) with at least one coating suspension (80) (see, for example, abstract, [0006], [0020-0023], and Fig 1-3). KiesslingB further teaches that flow channels containing

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clogs or excess coating can similarly have suction applied thereto to remove the excess, and that such removal processes can be performed repeatedly until the desired coating level is achieved (see, for example, [0036]). As both KiesslingB and Kiessling in view of Hoyer have taught methods for coating open-pored honeycomb bodies with a coating suspension and subsequently applying suction to remove excess / blockages of coating solution from the channels, it would have been obvious to one of ordinary skill in the art at the time of invention to have repeated the excess removal process at least twice in order to achieve the predictable result of removing the excess from the channels to desirable levels when excesses remain following previous processing. By incorporation of additional suctioning steps, additional weighing steps to determine the excess would be conducted according to the teaching of Hoyer as such re-suctioning steps would be considered steps within the overall coating process operation.

29. Claim 8: Kiessling in view of Hoyer and KiesslingB teach the method of claim 7 (described above), wherein Kiessling has further taught suctioning from an end of the body (see, for example, [0055], Fig 2-3 and 5).

30. Claim 10: Kiessling in view of Hoyer and KiesslingB teach the method of claim 7 (described above), wherein Kiessling has further taught that the removal can alternatively be conducted in one suction step instead of a two step pumping and re-suctioning (see, for example, [0042]). Further KiesslingB additionally teaches that clogged or excess coating containing samples are the ones being repeatably suctioned to remove such excesses (see, for example, [0036], wherein each subsequent treatment would drawn out some amount of coating leaving a lower amount of excess

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after each run); so alternately, when such excesses are not present such additional processing steps would not be conducted.

Double Patenting

31. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

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Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

32. Claims 1-10 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-12 of copending Application No. 11/665591. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of the copending application are of sufficient specificity that the slight deviations between the claims are well within the level of one of ordinary skill in the art.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NATHAN H. EMPIE whose telephone number is (571)270-1886. The examiner can normally be reached on M-F, 6:45- 4:15 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Cleveland can be reached on (571) 272-1418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Nathan H Empie/
Examiner, Art Unit 1712